Cargo Movement Forecast

The SR432 Corridor serves a number of large industrial properties that generate substantial volumes of truck and rail cargo, as well as waterborne cargo. These include the Port of Longview, Weyerhaeuser, Longview Fibre, Pacific Fibre Products, and Chinook Ventures, all of which are located on the Columbia River, and the Mint Farm industrial park and Swanson Bark, among other, on the landward side of the corridor. Interviews with firms on these properties served as a basis for the forecasts.

In addition, forecast growth rates were available from two recent studies of cargo movements in the region, and these were used in conjunction with the survey data. The two recent forecasts used were the 2004 Marine Cargo Forecast prepared for the Washington Public Ports Association (WPPA) and Washington State Department of Transportation (WSDOT), and the Portland/Vancouver International and Domestic Trade Capacity Analysis prepared in 2006.

Previous Forecasts
2004 Marine Cargo Forecast

In 2004 BST Associates completed forecasts of waterborne traffic on the Lower Columbia River. These forecasts projected waterborne cargo movements by commodity type, and included the distribution between Washington and Oregon ports, both with and without deepening of the shipping channel. In addition, an estimate was made of the mode of transport used between the river ports and inland origins and destinations.

To a large extent the ports on the Lower Columbia River are export centers, and most of the cargo tonnage moving through these ports is outbound. For the WPPA study, forecasts were prepared for exports of logs, wheat and barley, and coarse grains and soybeans. Forecasts of both imports and exports were prepared for other dry bulks, and liquid bulks, and logs.

The WPPA forecasts extended through 2025. For use in the SR432 analysis BST Associates extended the out year to 2030 by using the 2020-2025 growth rate for 2026-2030. It should be noted that these are baseline forecasts based on existing cargo volumes, and do not take into account potential new cargo movements.

As shown in Table 1, most of the waterborne cargo tonnage moving through Lower Columbia ports is in dry bulk form, including wheat and barley, coarse grains and soybeans, and other dry bulks. Of these dry bulks, coarse grains (such as corn and sorghum) are projected to see the strongest growth, averaging 1.7%. Wheat and barley exports are projected to grow 0.8% per year. In Washington movements of other dry bulks are projected to grow 0.5% per year, while in Oregon they are projected to grow 1.0% per year.

Log exports are not projected to grow between 2007 and 2030, while log imports are projected to see very slow growth, and from a very low starting level.

Washington ports on the Lower Columbia currently handle only small volumes of containers and do not currently service any dedicated container carriers. The volume of containers moving through Portland is forecast to grow 2.6%, assuming that the channel deepening is completed. There is some indication of interest in attracting container cargo to a west Longview site. It is not clear if this would be new cargo to the river, or a diversion from Portland.

In total, between 2007 and 2030 cargo tonnage moving through Washington ports on the Lower Columbia River is expected to grow 1.1% with deepening, assuming that the deepening is completed.

Table 1 – 2004 WPPA Forecast, Modal Split, and Modal Growth Rates
(Volumes in 1,000 Metric Tons, Containers are 1,000 TEU)

Commodity	Region	2007	2030	AAGR 2007-2030	2007 Rail	2007 Truck	2030 Rail	2030 Truck	AAGR Rail	AAGR Truck
Containers (1,000 TEU)	WA & OR	376	683	2.6%						
Log Exports	WA	356	356	0.0%	36.6%	58.0%	39.0%	57.0%	0.3%	-0.1%
Wheat & Barley	OR	5,522	6,628	0.8%	84.0%	1.0%	85.0%	1.0%	0.8%	0.8%
Wheat & Barley	WA	6,152	7,381	0.8%	84.0%	1.0%	85.0%	1.0%	0.8%	0.8%
Coarse Grains & Soybeans	WA	5,766	8,585	1.7%	84.0%	1.0%	85.0%	1.0%	1.8%	1.7%
Dry Bulk	WA	2,605	2,903	0.5%	84.0%	1.0%	85.0%	1.0%	0.5%	0.5%
Dry Bulk	OR	4,860	6,044	1.0%	84.0%	1.0%	85.0%	1.0%	1.0%	1.0%
Liquid Bulk	WA	581	609	0.2%	1.0%	2.0%	2.0%	3.0%	3.3%	2.0%
Liquid Bulk	OR	3,343	3,391	0.1%	1.0%	2.0%	2.0%	3.0%	3.1%	1.8%
Log Imports	WA & OR	77	83	0.3%	36.6%	58.0%	39.0%	57.0%	0.6%	0.3%
Total	WA	15,537	19,916	1.1%					1.2%	0.5%
Total	OR	14,178	16,829	0.7%					0.9%	1.1%

Source: BST Associates, *2004 Marine Cargo Forecast*

Modal Split

A large majority of the cargo exported through Lower Columbia River ports is moved to the ports by rail. According to the modal share estimates prepared for the 2004 WPPA forecasts, 84% of the dry bulks move via rail. Trucks account for just 1% of dry bulk tonnage, while most of the remainder moves by barge. In addition, approximately 1% of dry bulks move either directly into or out of plants. By 2030 the rail share is projected to grow slightly, to 85%, while the truck share is projected to remain 1%.

Liquid bulks move almost entirely directly into or out of plants, with only 1% moving by rail and 2% by truck. By 2030 the rail share is projected to grow to just 2% and truck share to 3%.

Logs move mainly by truck (57%) and rail (39%), and these modal splits are projected to remain steady through 2030.

Modal Growth Rates

Rail traffic associated with waterborne cargo movements at Washington ports on the Lower Columbia River is projected to grow by an average of 1.0% to 1.2% per year between 2007 and 2030. Truck traffic related to waterborne cargo is projected to grow by 0.4% to 0.5% per year during the same period.

Previous Forecasts

Portland/Vancouver International and Domestic Trade Capacity Analysis (2006)

Overview

Another recent forecast for the Lower Columbia River was completed in 2006 for the Port of Portland and other sponsors. A goal of this study, the *Portland/Vancouver International and Domestic Trade Capacity Analysis*, was to determine the impact of increased trans-pacific trade on the region's supply of and demand for trade support infrastructure (i.e., surface transportation and industrial land).

Although the primary focus of the study was the Portland-Vancouver area, the forecasts of waterborne trade are applicable to the Lower Columbia River in general, including Longview.

Modal Growth Rates

The Portland/Vancouver forecasts project that rail traffic is expected increase by an average of 1.5% per year between 2007 and 2030. Truck traffic is projected to grow by 2.6% per year.

Most of the growth in rail traffic will come from the intermodal (i.e. containerized) trade. Intermodal traffic moving by rail is projected to grow by an average of 2.1% per year, while other rail traffic is projected to grow by 1.0% per year. Since Longview is not currently involved in the container trade, the 1.0% rail growth rate is most applicable to the SR432 Corridor.

Rail traffic is primarily a westbound move, with westbound movements accounting for 87% of non-intermodal traffic. Truck traffic is much different, with a larger share being outbound than inbound. However, an even larger share of truck traffic is local.

Table 2 – 2006 Portland/Vancouver Forecasts by Mode

Description	2007 (1,000 short tons)	2030 (1,000 short tons)	CAGR % (2007-2030)
Outbound			
Truck	76,274	136,769	2.6%
Rail	2,182	2,450	0.5%
Intermodal	7,844	13,597	2.4%
Barge	5,435	5,874	0.3%
Ocean	19,972	25,271	1.0%
Air	251	624	4.0%
(Rail + Intermodal)	10,026	16,048	2.1%
Inbound			
Truck	63,638	109,252	2.4%
Rail	16,746	20,933	1.0%
Intermodal	8,885	13,212	1.7%
Barge	8,043	11,081	1.4%
Ocean	11,540	15,073	1.2%
Air	248	633	4.2%
Pipeline	23,763	28,810	0.8%
(Rail + Intermodal)	25,634	34,145	1.3%
Internal			
Truck	76,032	144,477	2.8%
Rail	316	698	3.5%
Barge	1,579	2,829	2.6%
Totals			
Truck	215,965	390,498	2.6%
Rail	19,246	24,082	1.0%
Intermodal	16,729	26,809	2.1%
Barge	15,067	19,783	1.2%
Ocean	31,565	40,344	1.1%
Air	498	1,257	4.1%
Pipeline	23,763	28,810	0.8%
(Rail + Intermodal)	35,978	50,891	1.5%
Grand Total	322,865	531,582	2.2%

Source: *Portland/Vancouver International and Domestic Trade Capacity Analysis*, Global Insight and BST Associates

SR432 Forecast

Overview

For the current SR432 Corridor Analysis BST Associates prepared forecasts of cargo moving through the corridor, by mode of transport. These forecasts were developed using data gathered in interviews with key cargo generators, in conjunction with the two recent forecast studies described above.

The biggest cargo generators along the corridor are the Port of Longview, Weyerhaeuser, Longview Fibre, Pacific Fibre Products, and Swanson Bark. Each of these generates tens of thousands of truck movements each year, and some also generate substantial volumes of rail traffic.

Growth rates for truck and rail traffic were calculated using the growth expected by each of the firms interviewed, as well as forecast modal growth rates from the WPPA forecast and the Portland/Vancouver forecast.

Major Changes to Rail

A small number of planned projects along the SR432 Corridor are expected to have a major impact on rail traffic. These include conversion of a west Longview site into a cargo-handling facility, construction of an ethanol plant at the Mint Farm, and the addition of a bulk export facility at the Port of Longview.

This increase in rail traffic is expected to have two components: a discrete jump in traffic levels, followed by incremental annual growth. Assuming that the majority of the cargo handled is dry bulks, the incremental growth rates for rail traffic is expected to be similar to that in the WPPA study, or 1.0% per year.

The ethanol plant now under construction at the Mint Farm is expected to bring an additional unit train per week through the corridor, in each direction. Once this facility is running it is assumed that traffic will grow by approximately 1.0% per year

The planned bulk facility at the Port of Longview is expected to handle a variety of grains and oilseeds. The startup of this operation should produce a discrete jump in rail traffic, followed by incremental growth. The projected incremental growth rate is 1.0% as well, as determined in the WPPA study.

In contrast to these potential large increases in traffic, two possible changes could reduce rail traffic. One of these is the likely discontinuation of the daily trains between the Weyerhaeuser plant on the waterfront and the firm's sawmill at Green Mountain in Toutle, which run along the Weyerhaeuser-operated Woods Railroad. The other potential drop in rail traffic may come from calcined coke exports. British Petroleum (BP) currently ships calcined coke through Longview from its plant near Ferndale, north of Bellingham. BP would prefer to construct a dock at its facility, which would eliminate the need to move the coke by rail to Longview. Assuming that the project moves forward the shipments through Longview would end before 2030.

Major Changes to Truck Traffic

A new sawmill upriver of the Port of Longview is likely to produce a jump in truck traffic on the SR432 Corridor.

Waterborne Traffic

Foreign imports and exports move through both public and private marine terminals in Longview. In 2005 private terminals handled an estimated 57.7% of waterborne exports and 56.5% of waterborne exports in Longview, while the Port of Longview handled the remainder. The major private waterfront terminals include Weyerhaeuser and Longview Fibre.

Exports make up the majority of waterborne foreign trade in Longview. In 2005 exports accounted for nearly 93% of all foreign tonnage, while imports accounted for slightly more than 7%.

Table 3 – 2005 Waterborne Trade (Metric Tons) by Terminal Type

Direction	Total	Port	Private	Private %
Foreign Exports	3,063,000	1,296,000	1,767,000	57.7%
Export Share of Total	92.7%	92.5%	92.8%	
Foreign Imports	243,000	106,000	137,000	56.4%
Import Share of Total	7.3%	7.5%	7.2%	
Total	3,306,000	1,402,000	1,904,000	57.6%

Source: BST Associates, using data from Port of Longview and US Dept of Commerce

Forecast Growth Rates

Based on interviews with major shippers along the SR432 Corridor it is estimated that the number of rail cars moved through the corridor will grow by an average of 0.8% per year to 1.8% per year. This rate is higher than that forecast in the previous two forecasts, due primarily to the addition of grain traffic at the Port of Longview. As discussed, once the Port's grain terminal is operational the long-run growth rate for the facility is likely to average approximately 1% per year. This estimated growth rate also includes the cessation of the Weyerhaeuser Woods Railroad Green Mountain rail traffic.

It is important to note, however, that these estimated growth rates do not include the possible jumps in traffic that new cargo movements at other properties would create. The types of cargo likely to use these facilities have projected long-term growth rates of 1% pear year, but they are also likely to create discrete jumps in rail traffic when new services are started.

Table 4 – Projected Growth Rates by Commodity Type and Mode

	Truck		Rail	
Commodity	**Low**	**High**	**Low**	**High**
Wood Chips, Hog Fuel, Bark, Sawdust	1.2%	2.0%	0.0%	0.8%
Waste Paper	0.2%	0.2%	-0.4%	-0.4%
Pulp & Paper	0.4%	1.6%	0.7%	0.7%
Lumber	5.6%	9.0%	0.8%	0.7%
Logs	2.1%	2.5%	N/A	N/A
Steel	-100.0%	0.0%	3.0%	3.0%
Petroleum Products	-100.0%	-100.0%	-100.0%	2.0%
Liquid Chemicals	2.3%	2.8%	0.2%	1.3%
Minerals	-1.1%	-0.7%	10.1%	12.2%
Other	0.0%	1.0%	1.1%	1.1%
Grand Total	1.6%	2.3%	0.8%	1.8%

Source: BST Associates

Truck traffic is not expected to be as strongly impacted by future plans. The majority of the truck traffic on the corridor is generated by the forest products industry, including log, wood chips, and waste paper inbound to mills and processors, and paper, lumber, mulch, hog fuels, and wood chips outbound. Truck traffic is projected to grow by an average of 1.6% to 2.3% per year.